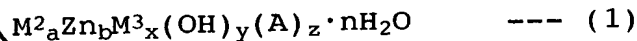


## CLAIMS

- 21B B1
1. A composite metal polybasic salt having a chemical composition represented by the following general formula (1),



- wherein  $M^2$  is a divalent metal other than Zn,  $M^3$  is a trivalent metal, A is an inorganic or organic anion, and a, b, x, y and z are numbers satisfying the following formulas,

- i)  $0 \leq a$ ,  $0 < b$   
 ii)  $3x + 2(a + b) - y - mz = 0$  (wherein m is a valency of anion A),  
 iii)  $0.3 \leq (a + b)/x \leq 2.5$ ,  
 iv)  $1.5 \leq y/(x + a + b) \leq 3.0$ , and  
 v)  $4.0 \leq (x + a + b)/z \leq 20.0$ , and  
 n is a number of not larger than 7,

- exhibiting diffraction peaks at  $2\theta = 2$  to  $15^\circ$ ,  $2\theta = 19.5$  to  $24^\circ$  and  $2\theta = 33$  to  $50^\circ$ , and a single peak at  $2\theta = 60$  to  $64^\circ$  in the X-ray diffraction (Cu- $\alpha$ ).

2. A composite metal polybasic salt according to claim 1, wherein an X-ray diffraction (Cu- $\alpha$ ) peak at  $2\theta = 33$  to  $50^\circ$  is a single peak.

3. A composite metal polybasic salt according to claim 1 or 2, wherein the divalent metal ( $M^2$ ) in said formula is magnesium.

4. A composite metal polybasic salt according to any one of claims 1 to 3, wherein the trivalent metal ( $M^3$ ) in said formula is aluminum.

5. A composite metal polybasic salt according to any one of claims 1 to 4, wherein the anions (A) in said formula are sulfuric acid ions.

6. A composite metal polybasic salt according to any one of claims 1 to 4, wherein the anions (A) in said formula are carbonic acid ions.

7. A composite metal polybasic salt according to any one of claims 1 to 4, wherein the anions (A) in said formula are silicic acid ions.

8. A composite metal polybasic salt according to any one of claims 1 to 4, wherein the anions (A) in said formula are organocarboxylic acid ions.

9. A composite metal polybasic salt according to any one of claims 1 to 4, wherein the anions (A) in said formula are phosphoric acid ions.

10. A composite metal polybasic salt according to any one of claims 1 to 9, wherein said composite metal polybasic salt has a laminate asymmetric index (Is) defined by the following formula (2),

$$Is = \tan \theta_2 / \tan \theta_1 \quad \text{--- (2)}$$

wherein  $\theta_1$  is an angle subtended by a peak perpendicular in the X-ray diffraction peak of a predetermined spacing and a peak tangent on the narrow angle side, and  $\theta_2$  is an angle subtended by the peak perpendicular at the above peak and a peak tangent on the wide angle side,

which is not smaller than 1.5 at a peak of  $2\theta = 33$  to  $50^\circ$ .

11. A method of preparing a composite metal polybasic salt by reacting a water-soluble salt of a trivalent metal with an oxide, a hydroxide or a water-soluble salt of a divalent metal including zinc as an essential component under the conditions of a pH of from 3.8 to 9.0 and a temperature of not lower than  $50^\circ\text{C}$  and, if necessary, executing the ion exchange in the presence of an acid or a soluble salt of acid.

12. An additive for resins comprising a composite metal polybasic salt of any one of claims 1 to 10.

13. A heat insulator comprising a composite metal polybasic salt of any one of claims 1 to 10.

14. An anion-exchanger comprising a composite metal

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AdB2

The first part of the paper is devoted to the study of the asymptotic behavior of the solutions of the system (1.1) as  $t \rightarrow \infty$ . In the second part, we study the asymptotic behavior of the solutions of the system (1.1) as  $t \rightarrow 0$ . In the third part, we study the asymptotic behavior of the solutions of the system (1.1) as  $t \rightarrow \infty$  and  $t \rightarrow 0$ .

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